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ABSTRACT

The relationships among time perspective, mood, age, and an academic grade point average (GPA) and goal-writing abilities were investigated in 123 senior baccalaureate nursing students from three university programs. Time perspective--past, present, and future--was measured by an Experiential Inventory, Circles/Line Test, and two Opinion Surveys. A total goal-writing proficiency score was obtained comprising measures of relevance, specificity, and usefulness of the goals written by students in response to a hypothetical clinical story. Results of the data analysis indicate an absence in relationship between the goal-writing proficiency scores and the time perspectives, mood, or GPAs held by the students. Twelve subjects who perceived their past, present, and future as interrelated periods of time demonstrated greater proficiency in total goal-writing abilities than the remainder, who conceptualized their time zones in automistic patterns. Students with GPAs above 3.09 wrote more relevant goals but were not found proficient in the total goal-writing process. Subjects reporting a positive mood--happy, healthy, optimistic, or excited--held a more future time perspective than did those who were sad, pessimistic, sick, or bored. Mood did not influence goal-writing ability. (Author/KM)

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Time Perspective of Nursing Students and its Relationship to Nursing Care Planning

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Time Perspective of Nursing Students and its Relationship to Nursing Care Planning

Abstract

The relationships among time perspective, mood, age, and academic grade point average (GPA) and goal writing abilities were investigated in 123 senior baccalaureate nursing students from three university programs. Time perspective—past, present, and future—was measured by an Experiential Inventory, a Circles/Line Test, and two Opinion Surveys. A total goal writing proficiency score was obtained comprising measures of relevancy, specificity, and usefulness of the goals written by students in response to a hypothetical clinical story. Results of the data analysis indicated an absence in relationships between total goal writing proficiency scores and the time perspectives, mood, or GPAs held by students. Twelve subjects who perceived their past, present, and future as interrelated periods of time demonstrated greater proficiency in total goal writing abilites than the remainder who conceptualized their time zones in an automistic pattern, $p = .02$. Students with GPAs above 3.09 wrote more relevant goals but were not found proficient in the total goal writing process. Subjects reporting a positive mood—happy, healthy, optimistic, or excited—held a more future time perspective than did those who were sad, pessimistic, sick, or bored, $p = .03$. Mood did not influence goal writing ability. The study paves the way for future studies on the relationship between subjective time experiences and their influence on nursing care planning.

Time Perspective of Nursing Students and its Relationship to Nursing Care Planning

The variability in goal writing abilities among students and practicing staff nurses presents a multitude of problems for both education and practice. In education, it becomes increasing clear that some students grasp the intricacies of the goal writing process while others demonstrate numerous difficulties formulating specific goals that help set direction for their nursing actions. In practice, poorly written goals may cost the health care consumers billions of dollars when care is random and inefficient.

Great variability in goal writing competency of nurses has been observed over the past several years. Dr. Marjory Gordon has previously remarked about this phenomenon at a National Conference on Diagnostic and Ethical Reasoning. (Gordon, 1986) In attempting to code goal statements written by professional staff nurses, Gordon found that the ability to write clear, concise goal statements was most problematic. Her research revealed that nurses wrote goals that lacked accuracy, specificity, and usefulness.

But, before one can decide what methods best serve both the faculty

and the students in the teaching and learning of goal development, it seems imperative to know what influences the process of goal writing. Failure to analyze, synthesize, and express oneself are already known to affect the ability to write relevant, specific, and useful goals. Are there other factors affecting goal writing abilities as well ?

Goals have a natural orientation to the future, and it may be that writing goals requires the presence of a future orientation or time perspective, what one believes about time—past, present, and future. Time, as a purely abstract concept, has no meaning of its own, but it is clearly under our control. "Now", "not now", "before", "after", "earlier", and "later" constitute our control over time, and give it reality. We confront time, organize it, and put time to use. It represents what we expect and anticipate from the future.

Three questions seem to arise from this discussion. First, " Is time perspective related to goal development ? " Second, " Do goal development abilities increase in relation to the different time perspectives held by nurses ? " Third, "Are there other variables that also influence the goal writing process ? "

The purpose of this investigation is to determine if goal writing abilities differ in nurses who hold varied time perspectives, ages,

moods, and academic grade point averages.

Literature Review

An extensive search in the literature revealed no definitive answers on the relationship of time perspective and goal writing abilities. Some insight was gleaned from information on the multidimensional aspects of time perspective relative to mood, age, movement, achievement, and the use of time.

Perception of time was believed to be derived from a succession of events that are remembered from the past and the expectation of what are anticipated from the future. As a continuous, dynamic, and ever-changing process, time perception can alter decision-making and behavior depending on the situation. (Cottle, 1967, 1976)

Cottle's research identified individuals' beliefs and feelings about various aspects of time: the importance of the time zones, continuity, relationships, and the dominance of one time zone over the others. In his investigation of 428 men and 102 women, who were United States Navy personnel involved in a 16 week voluntary medical training program, Cottle found that 60 % of these 17 - 21 year olds perceived their existence in a discontinuous fashion. Each day was viewed with

its own historical boundaries.

The interrelationships or temporal relatedness among the time zones appear to have a developmental link as noted by investigators who studied how individuals perceive their time zones in relation to one another. Ideally, personal experiences in respect to past, present, and future, wherein the past influences present decisions that ultimately alter the future, constitute a "balanced orientation". (Gonzalez and Zimbardo, 1985). But this "balanced orientation" that included all three time zones—past, present, and future—was absent in 50 % of the young adults studied. The balance tended to become more evident as age increased to 40 years and older, indicating a developmental process. Kastenbaum (1966) also suggested this developmental link to the temporal relatedness concept.

Cottle expected that most of his sample would tend to be future planners because they were young and had the majority of their lives ahead of them. Psychologists have suggested that the young look to the future because it is longer in duration than the past, with adolescents and young adults commonly engaged in life-long planning, a major task for this group. (Kastenbaum, 1965, 1966) But Cottle discovered that 55 % of his sample neglected to plan or perceive a distant future in

their life span. Only the immediate or near future was recognized that seemed to indicate a degree of uncertainty about long term events. Time zone perspective was more reflective of near past to present.

In addition to age, one's time perspective may be changed by affective states and socio-economic status. (Wallace, 1956; Teahan, 1958; Fraisse, 1963; Newman, 1979: Fitzpatrick, 1980; Newman & Gauduano, 1984; Gonzalez and Zimbardo, 1985) Happy and optimistic moods tend to be more conducive to future planning. Sadness, illness, fatigue, boredom, and depressed states influence time perspective by leading one to be more reflective of past events and less capable of looking ahead. Studies have also demonstrated that low socio-economic status may lead one to become devoid of future planning, if no hope for improvement exists. (Fraisse, 1963)

In addition to the consideration that various factors affect time perspective, it appears that people use time differently. Kluckhohn and Stodtbeck (1961) included time perspective in their extensive interview schedules during their study of five communities in the American southwest and in previous work of this kind with other populations. the researchers believed that time was one of five value orientations responsible for human acts and thoughts as they pertained

to every day problem-solving. They also felt that perceived control over one particular time zone influenced decision-making.

Kluckhohn and Stodtbeck plus many others have recognized that individuals use the present to plan the future because they feel that they have control over it in time. They may manipulate it, and may fill the present with expectations and intentions thereby using the present for a better tommorow. In a study by Teahan (1958) on a sample of 60 seventh and eighth grade boys, future planners were considered to have extended futures and tended to be high achievers. Their motivation appeared to be derived from the control they felt over future situations and what they expected these future situations would be like. A high degree of optimism and achievment prevailed in this group, and in a similar group of 251 teenage boys. (DeVolder and Lens, 1982)

In another sample of 52 university freshmen, Raynor (1970) linked achievement (a high final grade in an introductory psychology course) to future expectations (the course directly related to their long term goals). The researcher concluded that these men and women appeared to be willing to postpone gratification and tolerate the discomfort of study demands for outcomes to be realized years later. Their energies seemed to be directed toward the future. But the researcher also

acknowledged that this finding may not be true for all academic courses, especially if the course was not viewed as directly applicable to any specific career pattern. An alternative to this explanation may be that students had a greater interest in the course content or the professor influenced their performance in a number of ways.

In addition to the use of the present to alter the future, other studies found students using time by directing their energies toward the past creating less energy for the future and events within it. In an investigation of 80 doctoral students at two universities, Goldrich (1967) claimed that those who tended to invest themselves more in the past were less efficient and effective at completing their dissertations. Investment in the past was measured by avowed recall of minute details in personal history using a Memory Scale. The researcher reasoned that those who remembered more minute details of the past were more invested in it and were making less progress toward accomplishing their goal.

Temporal perspective, one's beliefs about time, was considered useful in describing how individuals organize their personal world to make it meaningful and ordered. (Wallace, 1956) In several studies, temporal perspective was thought to regulate much of an individual's

behavior and movements in relation to real time. (Newman,1976; Wessman & Forman, 1977; Fitzpatrick, 1980 ; Newman, 1982; Newman & Guadiano, 1984; Engle, 1986)

Researchers, psychologists, and sociologists tend to agree that life in America has a normal orientation to the future. But, Fraisse (1963) claimed that exceptions can occur among those whose anticipations of the future may be blurred (the elderly), painful (victims of chronic diseases), or blocked (as in fatigue states). In these situations, planning for the future may be done by others, such as nurses, social workers, and other professionals. Nursing care planning, the development of realistic person-centered goals formulated to treat identified nursing diagnoses serve as directives for expected outcomes. (Carnevali, 1983) To plan successfully for others, nursing students must be oriented to the future of other persons, building upon their past strengths and experiences.

Although all of these studies provided information about time perspective, mood, age, movement, or the use of time, little is known about these variables in respect to the goal development process in nursing practice.

Theoretical Framework

The importance of the time zones in relation to our experiences in time; the belief that one time zone dominates over the other two; and use of time to solve problems comprise three measures of time perspective that will be considered equal in weight for the purpose of this study. Each measure reflects time somewhat differently.

Cottle (1976) theorized that we are influenced by the role of memory, the perception of our present experiences, and anticipation of future ones. How much we may be influenced by each time zone can be determined by the importance we attribute to each. Importance is based upon the number of our most significant life events placed in each time zone weighted according to the mean number of events within it. If more significant events are placed in the present than in either the past or future time zones, a person considers the present as most important. In this study, a ranking of one, two, or three is given for where one places more significant events—past, present, and future time zones, respectively.

However, Cottle further stated that even though we may have placed more importance on one time zone, it does not infer that we ignore the

other two. It simply identifies the time zone where one places more significant events.

Perceived dominance of one time zone over others has implications for future direction and movement, such as in our thoughts, behaviors, and actions. Cottle believed that dominance could be measured by asking his study participants to conceptualize their past, present, and future in the form of different size circles and then to draw these circles. The largest circle represented the time zone that was most dominant and was ranked accordingly. In addition to noting dominance, Cottle measured the relationships among the time zones. In this study, the circles are ranked one to three if the largest circle is past, present, and future respectively. The relationships or lack of relationships among the time zones also are identified.

Use of time denotes a measure of perceived control over a situation. Importance and dominance of time zone categories may have certain similarities, but use of time that reflects feelings of control may vary depending upon the situation and time zone perspective. Kluckhohn and Stodtbeck (1961) believed that there were " between and within cultural differences " and that time perspective is influential in decision-making. If people are provided with common problem situations

and required to select from among three choices representing different time zone perspectives, they tended to select the choice most reflective of their own time zone perspective. In this study, the choices are ranked one to three—past, present or future respectively.

Achievement, age, and mood seem to be connected with time perspective. Planning, a future oriented task, appears to require a future time perspective. If future planners tend to be high achievers, than students with higher academic grade point averages will be more proficient in planning nursing care because they have been successful in planning their own lives. If time perspective is enhanced by a growth and development process and influences nursing care planning ability, then older students will be more proficient in planning care. And, if positive moods, such as happy and optimisitc, are more characteristic of future planners, and sad, sick, fatigue, and boredom states are characteristic of the inability to plan, then those in a more positive mood would be more proficient in planning nursing care.

Hypotheses

1. Nursing students who have a higher score on the time perspective

measures indicating a future time perspective will demonstrate a greater proficiency in goal writing abilities as measured by a Goal Writing Evaluation Form than those students who have a lower time perspective score representating a past or present time perspective.

2. There will be a positive relationship found between total scores on the time perspective measures and the ability to write relevant goals.

3. There will be a positive relationship found between total scores on the time perspective measures and the ability to write specific goals.

4. There will be a positive relationship found between total scores on the time perspective measures and the ability to write useful goals.

5. There will be a positive relationship found between total scores on the time perspective measures and the students' grade point average.

6. There will be a positive relationship found between age and total goal writing proficiency scores.

7. Those students reporting a positive mood will be found more proficient in total goal writing ability than those students reporting a negative mood.

Method

Operational definitions:

1. Time perspective, as measured by an Experiential Inventory (EI), Circles/Line Test (CLT) (Cottle, 1967 and 1976), and two Opinion Surveys (OPS1 and OPS 2) (Kluckhohn and Stodtbeck, 1961), is comprised of three concepts: importance in relation to experiences in time, perceived dominance of one time zone in relation to the other two, and the use of time to solve problems.

Students are considered to have a past time perspective if they rank from four to seven on the four time perspective measures: EI, CLT, OPS 1 and OPS 2. Students are considered to have a present time perspective if their rank ranges from eight to nine on the four time perspective measures and a future time perspective if they rank from ten to twelve.

2. Mood, self-reported by students at the time of the study, is considered positive if the participants state that they are either happy, healthy, optimistic, or excited. Negative moods include those that are sad, unhealthy, pessimisitic, or bored.

3. Proficiency in nursing care planning, as measured by use of a Proficiency in Goal Writing Evaluation Form, is equal to a rank of zero (lowest) to twelve (highest) that students achieve by writing goals

based upon twelve criteria. The goals are written in response to a hypothetical clinical story developed for this study.

The twelve criteria are subdivided into three equal categories: relevancy, specificity, and utility. These categories represent three groups of skills essential for goal writing.

Relevancy is defined as the ability to write goals that are directly related to the clinical story, do not conflict with the medical diagnosis or usual clinical management, and are directed at helping to resolve an actual or potential health problem contributing to the medical diagnosis.

Specificity is defined as the ability to write goals that include definite content, such as modifiers (amounts, sizes, and locations), set direction for an achievable outcome, are person-centered, realistic for the person in the story, and include a time specification.

Utility is defined as the ability to write at least three concise goals that are useful as a guide for developing nursing actions and for evaluation.

Instrumentation:

A student profile section, the EI, CLT, OPS1, OPS2, and the nursing care planning situation for the goal writing exercise are grouped

together in a Time perspective and nursing care planning tool. All sections of the tool except OPS 1 and OPS 2 were pilot tested on 49 senior baccalaureate students and revised to clarify all sections as needed. The OPS 1 and OPS 2 are added to this tool to increase the measures of time perspective.

The student profile section contains four objective profile items—mood, social class, grade point average, and age. The students self-report their present mood by selecting one out of eight alternative states: happy, sad, optimisitc, pessimistic, healthy, sick, excited, and bored. For social class, students select one from a choice of three classes: upper, middle, and lower. Grade point average is estimated by each student and based upon the academic grade point system of 1 to 4 with 4 as the highest. Age in years to nearest birthday is listed by each student.

In the EI, students assign important events in their lives to one of the three time zone categories—past, present, and future. The EI indicates the way in which memory, the perception of present experiences, and anticipation of future experiences influence an individual.

The CLT measures the dominance of one time zone and its

relationships to the remaining two zones in the form of unequal circles drawn along a time line. It represents not only one's linear perception of time, but a spatial one as well.

Space below the EI and CLT allows for student comments to lend validity to the responses on the two items.

The Opinion Survey comprises two items, OPS 1 and OPS 2, each representing a common problem with three alternative solutions. With other components in an interview format, it has been field tested, modified, and further used with a variety of cultures over a period of years and found to have construct validity. OPS 1 and OPS 2 determine time zone perspective in relation to how time is used.

The nursing care planning situation is a clinical story about an older adult with several common health problems: obesity, anxiety, loneliness, activity intolerance, and an inadequate support system. After reading the clinical story, students write health goals for the person described in the story. The story's content was reviewed by three nurse faculty who found it consistent with a common clinical situation; that the problems were easily identified by the reader who would be a senior student enrolled in a course or completed a course with this content; and that the expectations of writing goals for the

person described in the story could be met by such a student.

The Proficiency in Goal Writing Evaluation Form guides the ranking of goal writing abilities. It contains twelve criteria adapted from Carnevali (1983) and several other current nursing process texts. These criteria represent the essential characteristics of goals. A coding manual was developed and revised for use in evaluating the goals. It was also critiqued by three nurse faculty who found it easy to use and appropriate as an evaluation model for measuring goal writing abilities.

Subjects:

Three schools of nursing were purposefully selected for their locations as they represent three diverse sections of the country: the northeast region (n = 38), deep south (n=42) and the far west (n =43). Students volunteered to participate in the study in non-class time. Only senior students who had completed or were close to completion of an advanced course in adult health with a clinical focus on medical-surgical nursing care were included in the study.

Permission to administer the time perspective tool was granted by the Nursing Research Committees of three university baccalaureate schools with four year generic nursing programs in the continental United States.

Testing procedure:

After completion of page one, the student profile section, students responded to the EI and CLT. In the EI, subjects were asked to think of ten of their most important events in their life span. These events could be ones that they have experienced, ones that they are now experiencing, and ones that they expect to occur. They were instructed to assign the total number of important events to the time zone categories to which it belonged.

In the CIT, the students were asked to think of their past, present, and future in the shape of unequal size circles. Then, they were to draw these circles along a time line using the line as a reference in any way they chose. To assist with drawing circles of unequal size, each student was issued a specially designed circle guage that consisted of a 12 in. square of poster board with four cutout circles of varying size: 1 in. to 3 in. in diameter. (Cottle found that during his study analysis of his Circles Test, students drew circles of equal size or in such odd shapes that it was difficult to interpret. Some circles fell off the edge of the paper.) The circle guage and time line that was centered on the page were added in this study to encourage the drawing of unequal but symmetrically shaped circles more central to the page.

Beneath the CIT, space was left available for students to write a brief explanation of their drawings. As projection tests have been viewed as controversial in nature (Polit and Hungler,1982), the comments made by the participants provided some validity to the responses made in the EI (the importance of the time zones in relation to life events) and the CLT (dominance of one time zone over the other two). In rare cases where students placed the same number of events in two different time zones, the comments aided in establishing a score for the EI based upon the 100 % agreement between the two researchers.

Page three, containing OPS 1 and OPS 2, requested that students choose among three altenative solutions to common life problems. The first problem consisted of a story about how children should be brought up; the second story focused on one's future expectations. In both stories, the solutions to the problems reflected a past, present, or future time perspective depending on the solution chosen by the participant.

The final segment of the tool was a given hypothetical story about a typical person with common health problems and an uncomplicated hospitalization, surgery, and recovery. Students read the situation, then identified the person's needs and problems in the story and planned

nursing care by writing person-centered goals. Neither the amount nor type of goals (long term or short term) was specified; instead, the participants were instructed to write as many goals as they wished. A full page was provided for the response.

No specific time allowance for completion of the tool was specified.

Reliability and validity

Both the EI and the CLT had been previously used by Cottle in his research on measuring time perspective and correlations between other time perspective measures used in his work were high, as reported by Cottle. The ages of Cottle's sample were somewhat younger than the student group in this study and had less age variability. The tools were pilot tested and refined prior to use in this study. Implementation of all suggestions made by Cottle in revising the tools for further use in research studies were also done.

Cottle stated that the responses on the EI and CLT could be verified by the comments made by the particpants below the two items. The respondents were asked in this study to provide a written overview of their drawings in the space below the CIT. Almost all the students wrote several sentences or phrases indicating that the size of their circles measured the importance they placed on each time zone, hence

the importance and dominance concepts were upheld. In addition, a significant relationship was found between the EI and CLT indicating that both surveys, the importance one places in a time zone and dominance of one time zone, measured the same construct.

Content validity or the sampling adequacy of the time perspective concept, was limited here to its operational definition and not meant as an exhaustive exploration of all avenues of the subjective value of time. Criterion-related validity was determined by the presence of relationships between time perspective and mood; i.e., those in positive moods having higher time perspective scores.

The goal writing segment of each tool was detached from the responses on time perspective, given a code number, and scored separately to avoid contamination with the TP section of the study. Intercoder and intracoder reliability were established on all criteria by using three coders, working independently, who scored all the goals on two separate occasions one month apart to allow for a specified time for forgetting. (Goodwin & Prescott, 1981)

Topf's model (1986) was used to estimate intracoder and intercoder realiability employing the total percentage of agreement (T %), the percentage of agreement that the criterion was met (M %) and

the percentage of agreement that the criterion was not met (NM %).

Reliability estimates are reported in Table 1.

Table 1

Intracoder and Intercoder Reliability

Intracoder Agreement	M%	NM%	T %
A with A	51 %	40 %	91 %
B with B	50 %	41 %	91 %
C with C	35 %	48 %	83 %
Intercoder Agreement			
A with B	45 %	38 %	83 %
A with C	40 %	42 %	82 %
B with C	38 %	41 %	79 %

M % = percentage of agreement that the criterion was met

NM % = percentage of agreement that the criterion was not met

T % = total percentage of agreement

Intracoder and intercoder agreements ranged moderately high. Each coder was a school of nursing faculty member with several years experience in teaching baccalaureate students. The two researchers acted as coders and one other faculty member from a school of nursing not involved in this investigation was selected because of her interest in the study.

A coding manual was developed and refined after several trials with randomly selected goals from the study. The model for developing instruments for measurement of criteria suggested by Howe (1980) was incorporated into the development process. The criteria and coding manual were critiqued by three nurse faculty and found appropriate and useful for its purpose.

Data Analysis

All data were entered directly onto computer, then cleaned using the data cleaning procedure outlined by Polit and Hungler (1985). Data were analyzed using the Statistical Package for the Social Sciences (SPSS^{X}) program. No attempt was made in this study to stratify the sample according to school at this time. Missing cases were deleted

from all analyses on a case by case basis.

Time perspective:

A time perspective (TP) score was computed by summing the four scores from the time measures, as suggested by Wilson (1985), to compute a rank. In each time perspective measure, the past time zone was ranked "1" ; the present time zone, "2" ; and the future time zone, "3". For the purposes of this study, low total ranks between six and seven were labeled as "past" as no score was found to be less than six. "Present" was determined as between the total in ranks of eight and nine, and "future" was ranked as ten through twelve.

Circles drawn as separate entities were referred to as "automistic"; circles that overlapped each other in some manner were placed into one group and labeled as "overlapping". The degree of overlap was not measured but an extensive evaluation of temporal relatedness can be found in Cottle's work.

Mood, social class, age, and GPA:

Mood, self-reported by the student as happy, healthy, optimisitc, or excited, was coded "2"; Sad, unhealthy, pessimistic, or a bored state was

coded "1". As almost all students claimed a "middle class" affiliation, social class was not considered for analysis.

GPAs were collapsed into two groups—low GPA (2.20 - 3. 08) and high GPA (3.10 - 3.90) using the mean of 3.09 as the break point (no GPA reported as 3.09). Those whose ages ranged between 20 - 24 were considered younger students and coded "1"; those who were older than 24 were considered older students and coded "2". The mean of 25 was also used here for the division.

Goal writing proficiency:

A total goal writing proficency (TGWP) rank was calculated by summing the scores from the twelve criteria yielding a possibility of zero to twelve. If the goals met each of the twelve criteria on the Proficiency in Goal Writing Evaluation Form, a score of "1" for each was given; if the criterion was not met, a score of "0" was used.

For further scoring, the criteria were grouped together into three equal sub-categories: the relevancy of the goal, its specificity, and its usefulness. Ranks were also computed for each of the three sub-categories by summing the scores from the first four criteria for relevancy, the second group of four for specificity, and the last group of

four for utility.

Results

A total of 123 female students completed the five page tool Time Perspective and Nursing Care Planning under faculty supervision. Two students left the goal writing section blank and were eliminated from the analysis for goal writing proficiency. Two students did not volunteer their GPAs and were eliminated from that portion of the study. Almost all students wrote comments below the CLT that assisted with establishing validity for their responses to the EI and CLT. The EI and CLT were found to be moderately related. (Kendall's tau b = .32, p = .000)

Seven hypotheses were tested. The level of significance p = 0.5 was chosen because this study represents a preliminary investigation into the work on time perspective and its relationship to nursing care planning. (Grosof & Sardy, 1985).

Hypothesis 1 attempted to determine if those who held a future time perspective were more proficient in writing health goals than those students who held a present or past time perspective. Total TP scores ranged from 6 - 12 out of a possible 4 -12 range. The median of 10 and

the mode of 11 indicated a more future time perspective held by the group. Only 20 participants (16 %) were found to have a past time perspective as defined by the study. Almost twice as many students (n = 39 or 32 %) held a present perspective while over three times as many held a future perspective (n = 64 or 52 %).

The TGWP scores ranged from 0 - 11 out of a possible 0 - 12 with a medium and mode of 6. Each of the criteria was also calculated separately to obtain the scores that are summarized in Figure 1 a., the number of students meeting each of the twelve goal writing criteria, with the criteria themselves listed in Figure 1 b. There were no significant differences found between time zone perspective and total goal writing proficiency. Therefore, Hypothesis 1 was not supported.

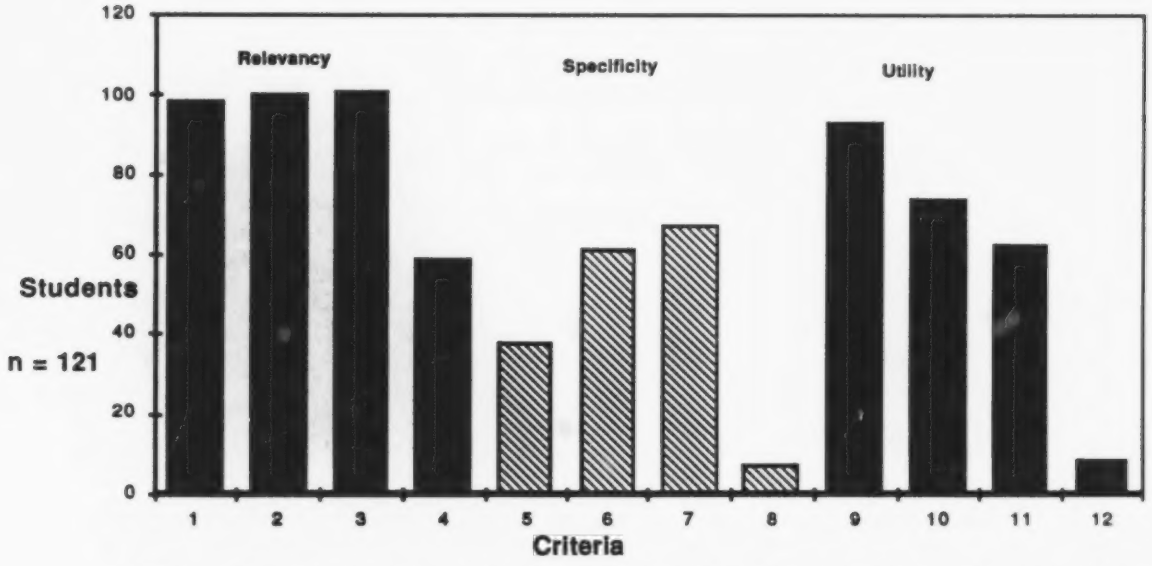

Figure 1a : Number of students meeting each of twelve goal writing criteria

Figure 1b: CRITERIA FOR HEALTH GOALS

A. Relevancy

1. All goals are directly related to the clinical story.

2. All goals are accurate in relation to the medical diagnosis or human condition.

3. All goals are accurate in relation to the usual post-surgical management.

4. Goals are written to help resolve an actual or potential health problem.

B. Specificity

5. All goals include definite content.

6. All goals set direction for an achievable outcome.

7. All goals are person centered, achievable for the person described in the clinical story.

8. All goals include a time specification to aid in measurement.

C. Utility

9. At least three goals are written.

10. All goals are concisely stated. 11. All goals are useful as a guide for nursing actions.

12. All goals are useful for evaluation of an intended behavior.

The pattern of separateness of the time zones or the automistic pattern prevailed in 87 % of the drawings (n = 107). The study participants discussed each time zone separately in the majority of cases.

However, it was discovered that those who drew their past, present, and future as three overlapping circles along the time line in the CLT instead of using an automistic pattern had greater TGWP scores. (U = 583.0, p = .02 for one tailed test). It appears that the 16 participants (13 %) who perceived their time zones as related and influencing each other and who saw life as a continuity of events rather than as separate periods of time were found more proficient in goal writing.

Some students were preoccupied with one dominant time zone. A few wrote in their comments that they lived for the present and did everything to make themselves happy " right now". Others wrote that they only lived for the future. The majority of participants were most enthusiastic about the future, as 60 % of the study participants designated their largest circle as future, and 59 % indicated that more important events would occur in the future.

Hypothesis 2 attempted to determine if there was a positive

relationship between total scores on the time perspective measures and the ability to write relevant goals. Relevancy reflected the students' ability to write goals that were related to the clinical story, were accurate, and were focused on helping to resolve an actual or potential problem, in this case the issues of smoking and eating behaviors. No relationship was found between TP scores and the ability to write relevant goals. Hypothesis 2 was not supported.

Hypothesis 3 attempted to determine if a positive relationship existed between total scores on the time perspective measures and the ability to write specific goals. Specificity of the goals was also not found to be related to TP scores and was the most problematic sub-classification of the total goal writing process for students. Only 6 % of the group (n = 7) included a time specification in each goal statement. Hypothesis 3 was not supported.

Hypothesis 4 attempted to determine if a positive relationship existed between total scores on the time perspective measures and the ability to write useful goals.

Goal utility, or the usefulness of the goals, required that the student write a minimum of three goals. It was initially determined by the three faculty members who critiqued the goal writing manual, that

in order for goals to be useful, at least three goals needed to be evident. In 23 % of the cases (n = 28), the participants wrote an insufficient number of goals.

There was a somewhat dubious relationship found between TP and those who wrote useful goals. (Spearman Correlation Coefficient = .1201, p = .048 for one tailed test) Because p = 0.48 was too close to the alpha level set for the study of p = .05, hypothesis 4 was not considered to be supported.

Figure 2 shows each time zone category with the ability to write useful goals.

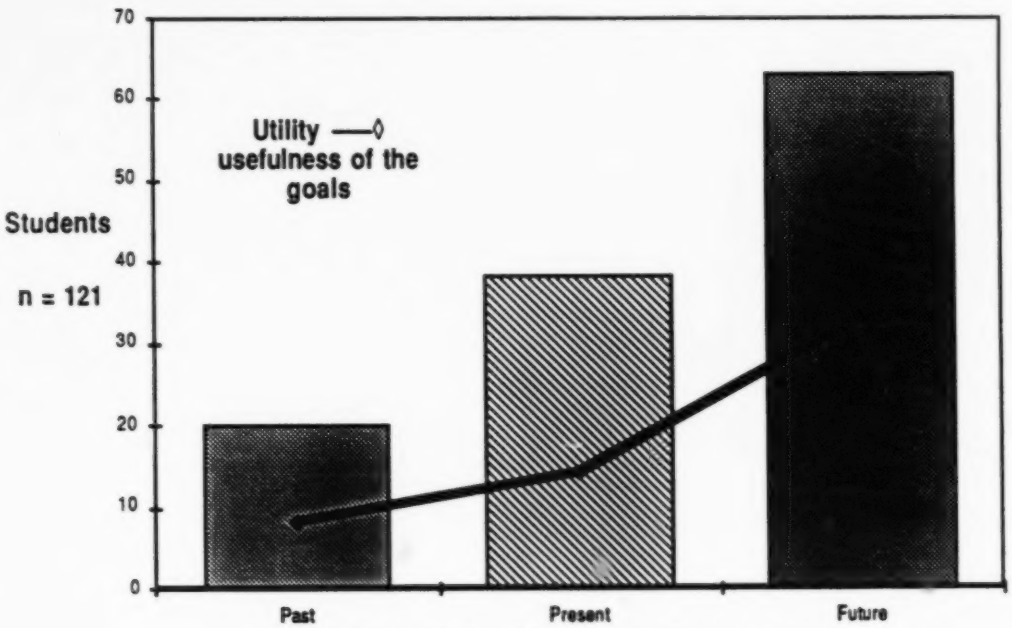

Figure 2: The relationship between time zone perspective and the ability to write useful goals

There was a positive relationship found between the overlapping

of circles drawn in the CLT and the writing of useful goals. Twelve students who overlapped their circles in the CLT were found more proficient in writing useful goals than those students who drew their circles as automistic. (Kendall's tau b = .23, p = .02)

Hypothesis 5 attempted to determine if there was a positive relationship between total scores on the time perspective measures and the students' grade point average. GPAs (n = 121) ranged between 2.20 and 3.90. The mean GPA was 3.09 (sd = .375) and the mode was 3.00. Time perspective and GPA were not found to be related; therefore, hypothesis 5 was not supported. However, more relevant goals were written by students who had higher GPAs above 3.09 (Kendall's tau b = 0.22, p = .009)

Hypothesis 6 attempted to determine if a positive relationship existed between age and total goal writing proficiency scores. Ages of the sample ranged from 20 - 47 years old with a mean age of 25 years (sd = 5.43) and mode equal to 22. Students, 24 years old or less, were found to have higher scores in total goal writing proficiency scores (Spearman correlation coefficient = - 0.2714, p = .001). Therefore, Hypothesis 6 was not supported.

Hypothesis 7 attempted to determine if those students reporting

a positive mood were more proficient in total goal writing ability than those students reporting a negative mood. Mood states were not found to affect the goal writing process lending no support to Hypothesis 7. There was a significant difference found in TP scores between students who reported a happy, healthy, optimistic, or excited mood and those who claimed to be either sad, pessimistic, sick, or bored. (U = 1312.0, p = .03 for one tailed test) The 68 % of the participants (n = 84) who reported a positive mood had a more future perspective than the 32 % (n = 39) in a negative mood

Figure 3 depicts the positive relationship found between GPA and the ability to write relevant goals.

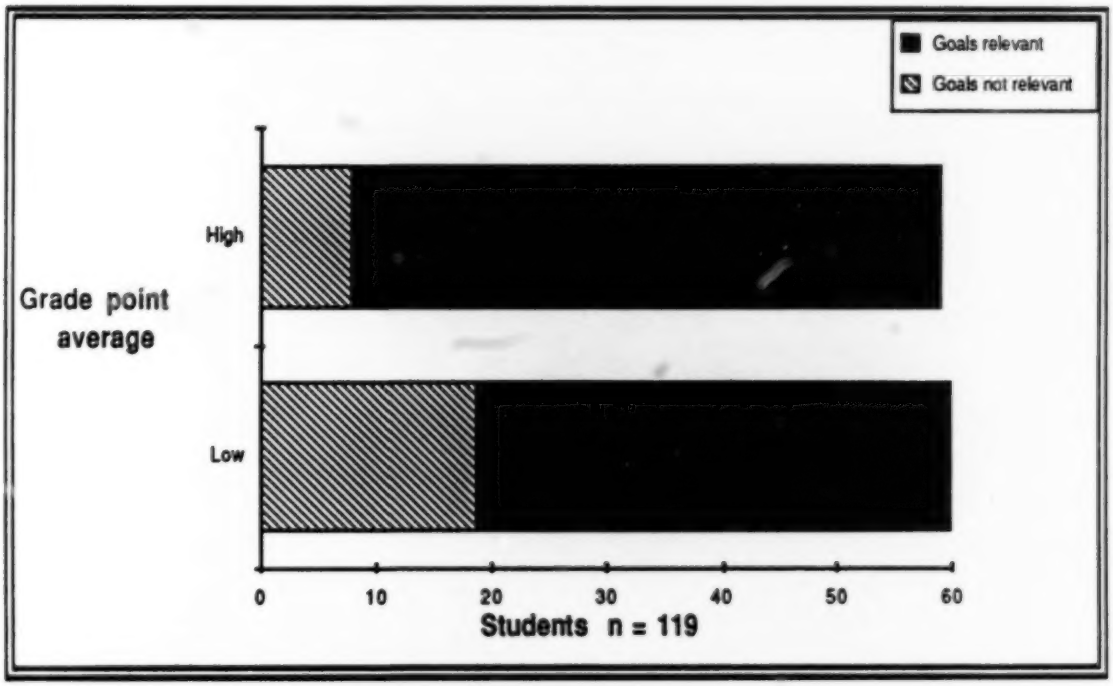

Figure 3: The relationship of grade point average and the ability to write relevant goals

Hypothesis 7. Those students reporting a positive mood will be found more proficient in total goal writing ability than those students reporting a negative mood.

Mood states were not found to affect the goal writing process lending no support to Hypothesis 7. There was a significant difference found in TP scores between students who reported a happy, healthy, optimistic, or excited mood and those who claimed to be either sad, pessimistic, sick, or bored. ($U = 1312.0$, $p = .03$ for one tailed test) The sixty-eight percent of the participants ($n = 84$) who reported a

positive mood had a more future perspective than the 32 % (n = 39) in a negative mood.

Discussion

The data partially support the general notion that the variability in goal writing abilities consists of a combination of factors that includes time perspective, age, and grade point average. More support for the relationships did not occur for the following two reasons.

First, the process of goal writing includes three distinct sub-categories of abilities: those needed to write relevant goals, those for specific goals, and still those for useful goals. Goals determined to be relevant did not necessarily meet the criteria for specificity or utility as seen in Figure 1 a. Also, the sub-categories seem to be influenced differently.

Time perspective was not found to be related to the ability to write goals. GPA was only found to be related to the ability to write relevant goals. The positive relationship found between students with high grade point averages and the ability to write relevant goals was expected. Only those who have an understanding of health problems and clinical management (as reflected by high grade point averages) could

write relevant goals. Goal relevancy was not influenced by time perspective because whatever students perceived about the importance of the time zones, dominance, and use of time to solve problems, would make no difference to the development of relevant goals.

Goal utility, on the other hand, reflects purpose. Time perspective and temporal relatedness as measured in this study tended to alter goal utility measures. Students who held a future time perspective or saw the flow of time as continuous may be more capable in personal goal development and direction. There is a strong possibility that these students perceive their own lives as a unified purposeful experience and transferred that purpose to the goal writing process. Here the students appear to transfer their personal views on life's unity and purpose to the purpose of the goals. Students' appreciation of the past appears to be linked to the present where energies are directed to develop the future of others.

Goal specificity requires the use language to express oneself, using sufficient detail to avoid ambiguity. An organized thought process is also essential for writing specific goals wherein one divides the total situation into smaller parts, reorganizes the given information, and formulates ideas based on that analysis. Therefore, it

was expected that the students with high GPAs would write specific goals. But, the relationship between GPA and specificity was not found. Many of the goals lacked definitive content, failed to set direction, and were nurse rather than person centered. It is possible that specificity in writing goals was hindered by the amount of time students took to complete the study. Students may have rushed to finish the final page of the tool that contains the goal writing task and failed to use the complex cognitive processes essential to the development of specific goals.

Some students wrote only two goals, but met most of the other criteria including a time specification. It seemed that those who wrote less were more proficient in the goal writing process. Many wrote comments all over the page without much attention applied to the goal writing task or to how concise their statements were.

The second reason why more support for the relationships between time persepctive and nursing care planning was not realized may relate to how time perspective was measured in this study. Time perspective, as measured here, points to a time zone ranking with consideration given to importance, dominance, and use of time. Participants are forced to choose one zone over the other two. It is only when ideas of

temporal relatedness or balance are explored that a total picture emerges.

It appears that only a small number of the students perceived time as continuous—the past, present, and future as a flow of events, each reflecting an interrelatedness of the movement of time. These students had higher goal writing proficiency scores and wrote more useful goals.

But most subjects perceived each time zone as separate with mysterious spaces of unaccountable time between. The past was divorced from the present and, in most instances, from the future. The past then became the least recognized time zone. Those who tipped the balance of time zones toward the future and left the past behind did not necessarily transfer their future perspective to the goal writing process. For if they were as concerned with the future as they stated and that perspective was conveyed to the goal writing process that reflects the future, perhaps a stronger correlation with time zone perspective would be realized.

Those preoccupied with one dominant time zone lacked a balanced time orientation according to Gonzalez & Zimbardo, who discovered that many young people view their lives in this way. Cottle also found that the automistic pattern predominated in his study of 17 - 21 year

olds. If two time zones were connected in rare comments, Cottle found that the present was also linked to the future. The relationship of present to the future was made in reference to the present being used to determine the future or that one could control the present and future.

Young people viewed the future as the time zone of maximum importance, as was found in this study, wherein 50 % of the sample was between 20 - 24 years of age. In addition, no score on the time perspective measures was less than six and more than one half the scores were greater than nine. Kastenbaum indicated that a feeling of mastery over the future was a dominant trait of the young who fail to integrate the other time zones into a frame of reference. The future is described as the most positive time zone, filled with hopes and excitement, a time for improvement and assumption of control. Perhaps because it is an unknown entity, it becomes more manipulable. The future is perceived as the time zone with the greatest time span; the present, on the other hand, is viewed as the shortest time duration with less time available for accomplishment.

The finding that over three times the amount of students had a future perspective rather than a past one is consistent with

Kastenbaum's research and developmental theory that adolescents and young adults have a natural movement toward the future. They tended to minimize the past and project themselves into the future. Kluckhohn and Stodtbeck discussed the phenomenon of values in the American culture that supported a future dominance with future preparation and goal directedness as evidence. Goal writing, however, did not reflect this future direction.

Given the developmental link between age and perceived continuity of the time zones, it was expected that the automistic group would be younger and report a lower GPA while students who conceptualized an intergration of time zones would have a higher GPA and be older. But these findings were not realized in this study.

There is much support for the relationship of mood to time zone perspective, but again this mood is not transmitted to the goal writing process. This finding is consistent with the numerous studies on optimism and other positive moods that were conducive to future planning and achievement.

Subjects in this study were considered normal under normal circumstances of schooling and its subsequent pressures. In studies on abnormal subjects, the opposite finding was determined to be true. For

example, Wallace (1958) concluded that future time perspective was limited in a group of schizophrenics as compared to a group of normal subjects.

Implications and Recomendations

More studies need to be conducted on the relationships between time perspective and the goal writing process. For if time perspective and other factors influence goal development, then nurse faculty and clinicians can be made aware of these and incorporate this information into teaching and nursing practice to aid in improved goal writing. For example, more work is needed on how much grade point average affects goal relevancy. Goals not related to the clinical problem or inaccurate goals can be costly and dangerous.

Further exploration on the influence of temporal relatedness within a time perspective tool is clear from this first investigation. Sanders (1986) has now published her work on the development of a tool to measure the subjective time experience. Herein, one conceptual dimension encompasses time perspective using the categories of past, present, and future while a second dimension attempts to capture meaning of the time experience to the person. The tool in all its

dimensions may prove helpful in establishing degree of temporal relatedness and other facets of time perspective.

It is highly recommended that goal writing proficiency be divided into subgroups of the essential skills that lead to total goal writing proficiency as certain skills appear to be influenced by different factors. The model used in this study that included twelve criteria as shown in Figure 1b demonstrates a useful format.

This study represents an initial attempt to investigate how the variability in goal writing is affected by time perspective, mood, age, and grade point average. Further research is also needed to determine if changes are warranted in nursing education and practice.

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